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UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION.

NO. 79.

BULLETIN OF FOREIGN PLANT INTRODUCTIONS.

July 16 to August 15, 1912.

NEW PLANT IMMIGRANTS.

(NOTE: Applications for material listed in this bulletin may be made at any time to this Office. As they are received they are filed, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it, as well as to others selected because of their special fitness to experiment with the particular plants imported.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders and others interested.)

GENERA REPRESENTED IN THIS NUMBER.

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PLATE: Castanea sp. Chinese chestnut.

MATTER IN THIS BULLETIN IS NOT TO BE PUBLISHED WITHOUT SPECIAL PERMISSION.

AMYGDALUS PERSICA. (Amygdalaceae.) 34131. Seeds of a peach from Guadeloupe, French West Indies. Presented by Mrs. F. T. F. DuMont. "In Florida there is a peach, which ripens in May and which is locally called the 'pinto peach.' I have never seen this peach below Rockledge. There is a peach here that is very much like it in shape and taste and grows and bears well and stands the heat. Its shape is long with a decided point at the apex. The stems are slightly indented in the fruit. The fruit is easily detached when ripe. The pulp is juicy, homogeneous and not stringy. It has more perfume and savor and is larger than the Florida peach. It is a freestone and peels easily. It is round, not flattened, averaging 1½ inches in diameter. It resists decay well, even in this heat (from 76° F. our coolest nights, to 90° always in the afternoons), some of the fruit lasting after being gathered for four days." (Mrs. F. T. F. DuMont.) For distribution later.

ANANAS SATIVUS. (Bromeliaceae.) 34124. Seeds of a pineapple from Brisbane, Queensland. Presented by Mr. William Soutter, secretary and manager, Queensland Acclimatisation Society. "Some interesting developments may be looked for from these seeds, as they are from a smooth Cayenne crossed with pollen from the Ripley Queen. The fruit weighed with the top, turned the scale at eleven pounds. During this past thirty years I have raised upwards of 30000 plants from seed. These have been for the greater part discarded as useless, the selected types now numbering about a dozen and these show constancy, and some possess high qualities. The smooth pine is an exceptionally shy seeder, and responds tardily to pollination, but not so the rough ones, which are readily pollinated and produce abundance of seeds." (Soutter.) For distribution later.

ANTIDESMA VENOSUM. (Euphorbiaceae.) 34163. Seeds from Durban, Natal. Presented by Dr. J. Medley Wood, Durban Botanical Garden. "An euphorbiaceous shrub or small tree five to fifteen feet in height, having a wide distribution through Central, East and West Africa. The smooth dark-red fruit one-half inch long or less is eaten by natives and children. They are not very palatable and probably might be injurious if eaten in quantity." (Sim, Forest Flora of Cape Colony.) For distribution later.

ASPARAGUS TRICHOPHYLLUS. (Convallariaceae.) 34133. Seeds of an asparagus from Novospassko, Russia. Presented by Mr. A. D. Voeikov. "An asparagus of twining habit, found in sandy and alkaline deserts in Central Asia. Of possible value in breeding work." (Frank N. Meyer.) For distribution later.

BAPHIA RACEMOSA. (Fabaceae.) 34164. Seeds from Durban, Natal. Presented by Dr. J. Medley Wood, Director, Durban Botanical Gardens. "An erect shrub or small branched tree with ascending branches. It is easily distinguished from all leguminous Cape shrubs in having simple, unifoliate ovate-lanceolate leaves. It has ornamental, white, strongly violet-scented flowers, with an orange spot at the base of the standard, and is known in Natal as the violet pea. The wood is too small to be used for timber, but if cut in winter, peeled at once and seasoned makes good implement handles." (Sim, Forest Flora of Cape Colony.) For distribution later.

BETA SP. (Chenopodiaceae.) 34252. Seeds of a wild beet from Artwin, Caucasus. Presented by Mr. A. Rolloff, Director, Botanical Gardens, Tiflis, Caucasus. This wild beet seed from the shores of the Black Sea was secured for the use of plant breeders interested in the improvement of this crop. For distribution later.

BOSCIA UNDULATA. (Rutaceae.) 34177. Seeds from Durban, Natal. Presented by Dr. J. Medley Wood, Director, Durban Botanic Gardens. "A large evergreen tree, often two to five feet in diameter with clean tall stems in high forests; frequent also as a bush or small spreading tree in scrub forests. The seeds germinate easily and the cultivation of the tree is simple. Timber white, close-grained, tough, hard and heavy, usually to be had sound in the mountain forests up to two feet in diameter and with ten to twenty rings to the inch. Used mostly by wagon-makers. In toughness it is the ash of the South African forests." (Sim, Forest Flora of Cape Colony.) For distribution later.

CAPPARIS CITRIFOLIA. (Capparidaceae.) 34165. Seeds from Durban, Natal. Presented by Dr. J. Medley Wood, Director, Durban Botanic Gardens. "A straggling shrub five to eight feet high, or with climbing branches where protected. Abundant in eastern Cape Colony and also in Natal. A decoction of the roots is used in local and native medicine." (Sim, Forest Flora of Cape Colony.) For distribution later.

CARISSA OVATA. (Apocynaceae.) 34153. Seeds from Sydney, New South Wales. Presented by Mr. J. H. Maiden, Director,

Sydney Botanic Gardens. "From Warialda, New South Wales. Growing at the foot of hills of a volcanic nature, subjected to periodical droughts, early in flowering and late in fruiting. The fruits are small, owing to the extreme drought during the past two years." (Collector's note.) An especially resistant species of Carissa introduced for breeding purposes. For distribution later.

CLAVIJA LONGIFOLIA. (Theophrastaceae.) 34122. Seeds from Trinidad, British West Indies. Presented by Mr. P. Carmody, Director, Department of Agriculture. "An evergreen tree attaining a height of ten to twelve feet, with orange colored flowers in drooping racemes three to four inches long on the trunk; leaves long-lanceolate, acute, spiny-toothed." (Nicholson, Dictionary of Gardening.) For distribution later.

DOVYALIS CAFFRA. (Flacourtiaceae.) 34250. Seeds of the kei-apple from Saff, Egypt. Presented by Mr. Alfred Bircher, the Middle Egypt Botanic Gardens. "A small tree, twelve to thirty feet in height, often thornless when in tree form, but exceedingly thorny when kept cut as a hedge, for which purpose it is much used, as it is impenetrable, and when once established stands drought remarkably well. Seeds soon lose vitality when kept dry, but germinate freely when fresh, and the plants are easily transplanted in the various nursery stages if not allowed to get a secure foothold, which they do rapidly. It does not succeed where frosts are regularly severe, but elsewhere requires to be cut twice a year to keep it in good hedge form, and makes a dense 5-feet hedge in five years. It stands cutting to any extent, and if a hedge has been allowed to make too much headway when young and becomes open below, it can be cut to the ground level and started afresh from the coppice shoots. Blanks in a hedge, if not too wide, can be remedied by interplaiting branches. The fruit is globose or depressed-globose, minutely velvety, 1 to 1½ inches in diameter, bright yellow, resembling an apricot, edible and used in preserves, but of too high flavor to be used alone. It is too sour for dessert use unless perfectly ripened under bright sunshine, and is sometimes attacked by the common peach maggot." (Sim, Forest Flora of Cape Colony.) For distribution later.

ERIOBOTRYA JAPONICA. (Malaceae.) 34119. Seeds of loquats from Rome, Italy. Presented by Dr. Gustav Eisen. "This shipment contains seeds of both the pear-shaped and apple-shaped loquats, of exceptional size, no fruit being less than two inches in diameter and some more. They are the best I have seen this year." (Eisen.) For distribution later.

GARDENIA THUNBERGIA. (Rubiaceae.) 34167. Seeds from Durban, Natal. Presented by Dr. J. Medley Wood, Director, Durban Botanic Gardens. "A small much branched tree, eight to fifteen feet high, with smooth, white, unarmed stem up to nine inches in diameter. Leaves very variable. Flowers terminal, solitary, strongly scented, large, white and attractive. Fruit woody, very hard, oval or oblong, two to four inches long, two inches in diameter, many seeded, remaining on the trees for several years, increasing in size with age, and finally either smooth or roughened but usually white. The strongly scented white flower makes this a favorite garden flowering tree, and it is also used as a stock for grafting the double Gardenia florida upon. The wood is hard, heavy and strong, and used for making tools, etc." (Sim, Forest Flora of Cape Colony.) For distribution later.

GOSSYPIUM SPP. (Malvaceae.) 34184-194. Seeds of cottons from Manila, Philippine Islands. Presented by Mr. M. M. Saleeby, Bureau of Agriculture. Eleven varieties of Philippine cottons sent in in response to requests for native varieties, all for use in breeding work. For distribution later.

GREWIA ASIATICA. (Tiliaceae.) 34181. Seeds from Saff, Egypt. Presented by Mr. Alfred Bircher, the Middle Egypt Botanic Gardens. A soft-wooded shrub or small tree producing a bast fiber much used in rope making. For distribution later.

HYPHAENE SP. (Phoenicaceae.) 34219. Seeds of the doum palm from Hamburg, Germany. Presented by Mr. Robert P. Skinner, American consul-general. Seeds imported to determine the possibility of securing large quantities of good quality doum palm seeds through the German importers of this seed for use in button-making. Immense quantities of seeds are imported through Hamburg to supply the button manufacturers of Germany with a cheap substitute for the vegetable ivory produced by the nuts of Phytelephas species. For distribution later.

JUGLANS NIGRA. (Juglandaceae.) 34254. Walnuts from Sucre, Bolivia. Presented by Mr. Ernest F. Moore, British vice-consul. "Variety boliviensis. These are from the same species of walnut that grows in tropical Santa Cruz but were taken from higher altitude, approximately 7500 feet and not more than one hundred miles from Sucre." (Moore.) For distribution later.

JUNIPERUS SPP. (Pinaceae.) 34140-145. Seeds of junipers from Novospassko, Russia. Presented by Mr. A. D. Voeikov. Six species of juniper from Turkestan and Russia, some

of which may be of value for afforestation work in arid and semi-arid regions. For distribution later.

KRAUSSIA FLORIBUNDA. (Rubiaceae.) 34169. Seeds from Durban, Natal. Presented by Dr. J. Medley Wood, Director, Durban Botanic Gardens. "A small tree up to 20 feet in height and one foot in diameter, with a fluted stem. Leaves evergreen. Fruit a small black berry. Wood heavy, hard, not used." (Sim, Forest Flora of Cape Colony.) For distribution later.

MABA NATALENSIS. (Diospyraceae.) 34170. Seeds from Durban, Natal. Presented by Dr. J. Medley Wood, Director, Durban Botanic Gardens. "A tree twenty to fifty feet high with very horizontal densely foliaged branches. Fruit one half inch in length, acorn-shaped in the green calyx cup, yellow when ripe, rather succulent though hardly edible. Frequent on the coast throughout Natal. Usually on the sand dunes or behind them. Rarely large enough for the wood to be used as timber." (Sim, Forest Flora of Cape Colony.) Introduced as a possible stock for the various species of Diospyros, to which it is closely related. For distribution later.

MANGIFERA INDICA. (Anacardiaceae.) 34199-205. Plants of mangos from Port Louis, Mauritius. Purchased from the Department of Forests and Gardens, through Mr. Gabriel Regnard. Seven varieties said to be the best grown in the island. For distribution later.

MEDICAGO SPP. (Fabaceae.) 34147-151. Seeds of medicagos from Jerusalem, Palestine. Presented by Mr. E. F. Beaumont. Five species, some of which are very drought-resistant. For distribution later.

OMPHALEA SP. (Euphorbiaceae.) 34156. Seeds from Bocono, Colombia. Presented by Mr. W. O. Wolcott, Brooklyn, N. Y. "I can give you no definite information about these nuts except what the natives told me, as I bought them in the town at the foot of the mountains and did not see the trees. The natives told me they grew high up in the mountains where it is quite cold, but not freezing, probably 7000 to 8000 feet or more, as Bocono where I got them is about 5000 feet. They say the trees grow quite large, 12 to 18 inches in diameter and 50 to 60 feet high, and are very prolific in nuts. They call the nuts by two names, Nueces (nuts), and Pan del pobre (poor people's bread). I have traveled for the last twenty years all over Venezuela and Colombia and have never seen them except at this one place. It rains a good deal in those moun-

tains for about six months of the year from April to September or October, but the rest of the year is dry. I got these last March just at the end of the season. I should judge they would make fine stock feed in meal; in fact, the natives eat them and told me they fatten their hogs on them finely as the shells are thin and very brittle. The meats appear to have much oil. I find them rather hard when dry. When I got them the meats were softer than chestnuts when first gathered." (Wolcott.) For distribution later.

ORYZA SATIVA. (Poaceae.) 34220-249. Seeds of rice from Manila, Philippine Islands. Presented by Mr. F. W. Taylor, Director of Agriculture, through Mr. O. W. Barrett, Chief, Division of Horticulture, Bureau of Agriculture. Thirty varieties, some of them yielding as much as two and a half tons per acre. For distribution later.

PERSEA LINGUE. (Lauraceae.) 34157. Seeds of lingue from Santa Ines, Chile. Presented by Mr. Salvador Izquierdo. "This is a very valuable industrial forest tree of large size, handsome, compact, evergreen, with glossy gray-green leaves and is an extra quick grower; here it is not a delicate plant but grows quickly in any soil that is wet or very moist, and also in water. The wood is light and tough like elm, but takes a very high finish. Its lumber is highly esteemed and is lasting if protected from the wet; used for furniture, bodies and poles of carts, ox yokes, etc. The wood is the color of white ash, and when finished has a yellowish tinge. It takes any stain. Its bark is solely used for tanning and is largely exported to Europe. Every station in the south is filled to overflowing with thousands of bags of broken bark awaiting transportation. The forests are being stripped, and in a very few years this tree will be very sarce. It is an extra beautiful shade tree. Its leaves are poisonous to animals, especially sheep,who are very fond of them. Medicinally it is a powerful astringent." (Jose D. Husbands.) For distribution later.

PHOENIX DACTYLIFERA. (Phoenicaceae.) 34213. Offshoots of the Medjool date, received through Mr. Walter T. Swingle from Dr. L. Trabut, Government Botanist of Algeria, who secured them from the Er Reteb region, Tafilelt, Morocco through Si Mohammed ben Idris Fassi. "The Medjool date comes from the Tafilelt region in southeastern Morocco. It is the finest variety in the Tafilelt country but is unknown in America and comparatively little known in Europe, except in England and Spain, in both which countries it brings a higher price than any other date on the market, in spite of the fact that it

is almost never put up in attractive form but is sold in bulk. Dates of this variety can be found in practically every grocery in Spain where they are known as "Datiles de Berberia." The fruit is large, from two to two and a half inches long, and from three-fourths to one inch thick. It is semi-translucent, dark brown in color, and has flesh rather firm in texture of a most delicious flavor. It is much darker in color than the Deglet Noor variety, and keeps much better. The dates always have the calyx attached to the stem end. This gift from the Service Botanique of the Algerian government to the Department of Agriculture marks an epoch in American date culture. These selected offshoots from the best locality in Tafilelt will not only show how this famous variety succeeds in the New World deserts, but will also make it possible to determine how truly it has been reproduced by the seedlings, some thousands of which are already growing in California." (Swingle.) For distribution later.

PRUNUS SIBIRICA. (Amygdalaceae.) 34134. Seeds of a Prunus from Novospassko, Russia. Presented by Mr. A. D. Voeikov. "A species of Prunus, closely related to the apricots, occurring in Eastern Siberia, Manchuria, and Mongolia. May be of value for breeding experiments." (Frank N. Meyer.) For distribution later.

SCHEFFLERA ACTINOPHYLLA. (Araliaceae.) 34123. Seeds of the "pinankaral" from Wellington Point, near Brisbane, Queensland. Presented by Mr. James Pink. "This is best known as the Queensland umbrella tree, which is a truly descriptive term for the growth of the foliage. It grows 20 to 30 feet high and has flowers on a terminal spike." (Pink.) For distribution later.

STRYCHNOS GERRARDI. (Loganiaceae.) 34161. Seeds of the quaqua from Mozambique, Portuguese East Africa. Presented by the Inspector of Agriculture. "A small tree, from three to ten metres high, without thorns and with exceedingly variable leaves. Fruit one-celled, globose, two to three inches in diameter, glaucous, glabrous, often spotted, with a hard shell, and numerous flat seeds lying in acidulous edible pulp." (Sim, Forest Flora of Portuguese East Africa.) For distribution later.

TRITICUM SP. (Poaceae.) 34126. Wheat from La Guaira, Venezuela. Presented by Mr. Thomas W. Voetter, American consul. "The grower of this wheat stated that it came to Venezuela originally from the Canary Islands and that it has been found to be the best variety known here to resist dry weather.

The sample sent was from a field that was not irrigated and received no rainfall from the time of sowing until harvested." (Voetter.) For distribution later.

TURRAEA OBTUSIFOLIA. (Meliaceae.) 34178. Seeds from Durban, Natal. Presented by Dr. J. Medley Wood, Director, Durban Botanic Gardens. "A free-flowering shrub, from three to five feet high, common on the dunes along the coast of Cape Colony and Natal. It is never large enough to be of economic value further than its use in holding fully exposed sea dunes; its showy flowers and seeds make it worthy of cultivation where it will grow." (Sim, Forest Flora of Cape Colony.) For distribution later.

NOTES FROM FOREIGN CORRESPONDENTS.

INDIA. Saharanpur. Mr. A. C. Hartless, Superintendent of the Government Botanic Gardens, writes July 11 in regard to mangos: "I am not prepared to enter into the question of whether the mango has an existant wild progenitor or not. Botanists are themselves apparently not certain on this point. The study of mangos has chiefly been confined to what may be called cultivated varieties, but there are an enormous number of uncultivated varieties, that are called wild, but are not really so. Many of these are very good, although wanting in size as compared with the garden varieties. There is one aspect about these so-called wild mangos that has been generally overlooked; that is the particular way in which their fruit can be utilized. By the natives nearly all are sucked and not the flesh eaten. I have this season tested many, and I was very much astonished to find out how pleasant and refreshing they are, when sucked, much in the way a lemon would be. Their juice mixed with aerated waters makes a very delicious and refreshing drink. To my mind for a country like America where such drinks are greatly appreciated, such a class of fruit would be a boon.

The trees bear prodigiously, the fruit is easily sent long distances, and probably some method could be devised of keeping the juice for some time. In this line there are I think enormous possibilities. In addition you will have a very fine tree, that gives excellent shade and produces first class timber. Seed could be easily introduced, and when once the tree begins to fruit, it would soon propagate itself. It would take probably from 10 to 15 years before the plant would fruit.

This year being an excellent fruiting year, I have been studying mangos a good deal, and I am astonished to find such a large number of excellent varieties that are undoubtedly seedlings even amongst our garden kinds.

With regard to your inquiry about the number of stamens in a flower. I have not made a particular study of this point, but so far as my memory goes only one fertile stamen was observed to one flower. Climatic conditions at the time of flowering very largely influence pollinating. Some years a crop is completely destroyed by rain or cloudy weather at the time of flowering. This year I experimented with bagging the flowers in order to prevent cross fertilization; although some fruits set, yet they dropped off very soon. A light, dry, and airy time is needed at time of flowering to ensure successful pollinating, and no irrigation should be done at that time.

Of the two varieties you mention I only know one, Mulgoa, this fruit is all right. I have never heard of a case where staminate flowers only are produced, although the inflorescence is of course polygamous.

There is one other point that I should like to bring to your notice, and that is our so called country Plums. These are supposed to be varieties of Prunus domestica, var. insititia. (Syn. P. Bokhariensis). These are supposed to have originally come from Bokhara. They are a distinct class of fruit, many are excellent, but I can find no record of them being grown in any other country than India. You may probably have come across them elsewhere in your extensive travels, and must have noticed them when you were in India. I hope to make a detailed study of them next year."

(Issued September 21, 1912.)

CASTANEA SP. Chinese chestnut.

Young trees of this wild chestnut are growing in this country in areas affected by the chestnut bark disease (Diaporthe parasitica Murr.) It is hoped that this species may be immune to this malady, which is killing out the native chestnut trees of the country, and may prove a substitute for our species. Its nuts are of fair quality.